

PEGATRON  SVR

# Ellington Sales kit

2U-2P (2-Socket) Server Solution

2023 Jan

V1.0

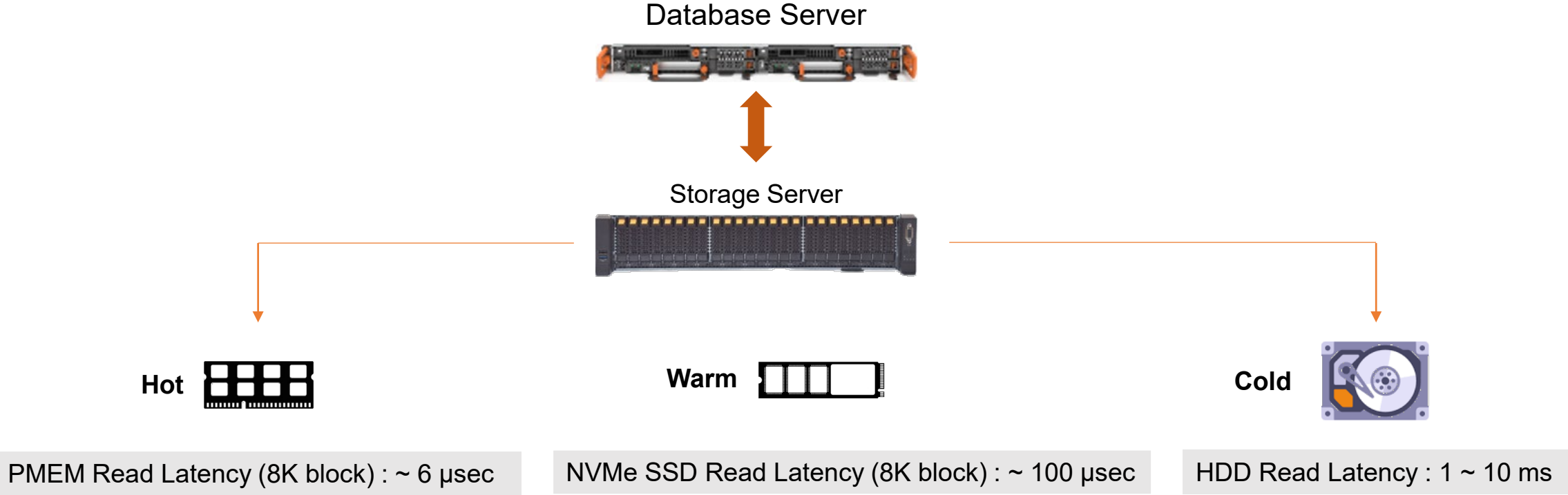
# Product Features

## 2U-2P (2-Socket) General Purpose Server Solution



- Intel Sapphire-Rapids 2-Socket processor solution
- High Memory (up to 32 x DIMM DDR5) and I/O for IaaS
- Intel Persistent Memory support to achieve High IOPS
- Support Ultra-fast All-Flash (PCIe5.0) or Hybrid Storage (SSD + HDD) Configurations
- Install up to 2 x Dual-Slot GPU card for AI Deep Learning
- OCP3.0 Ready
- Built-in Hardware Security (TPM2.0 & Optional for PRF3.0)

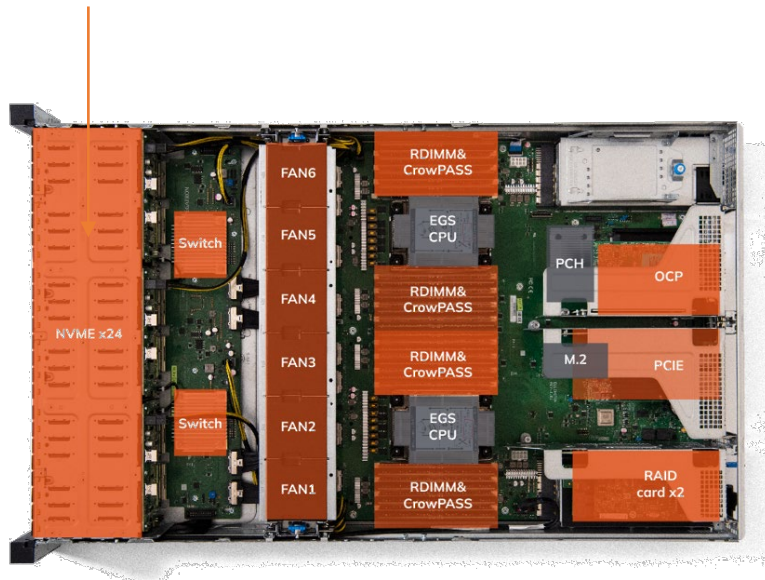
# Intel Optane Persistent Memory (PMEM) to Achieve High IOPS



**PMEM Read Latency << NVMe SSD << HDD**

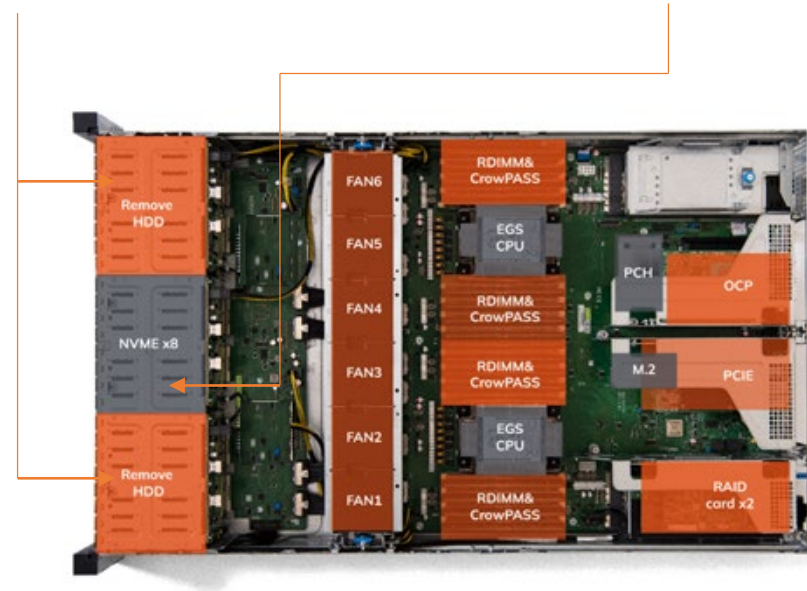
# All-Flash or Hybrid Storage (SSD + HDD) Configurations

24 x U.2 NVME SSD



16 x 2.5" SATA/SAS SSD/HDD

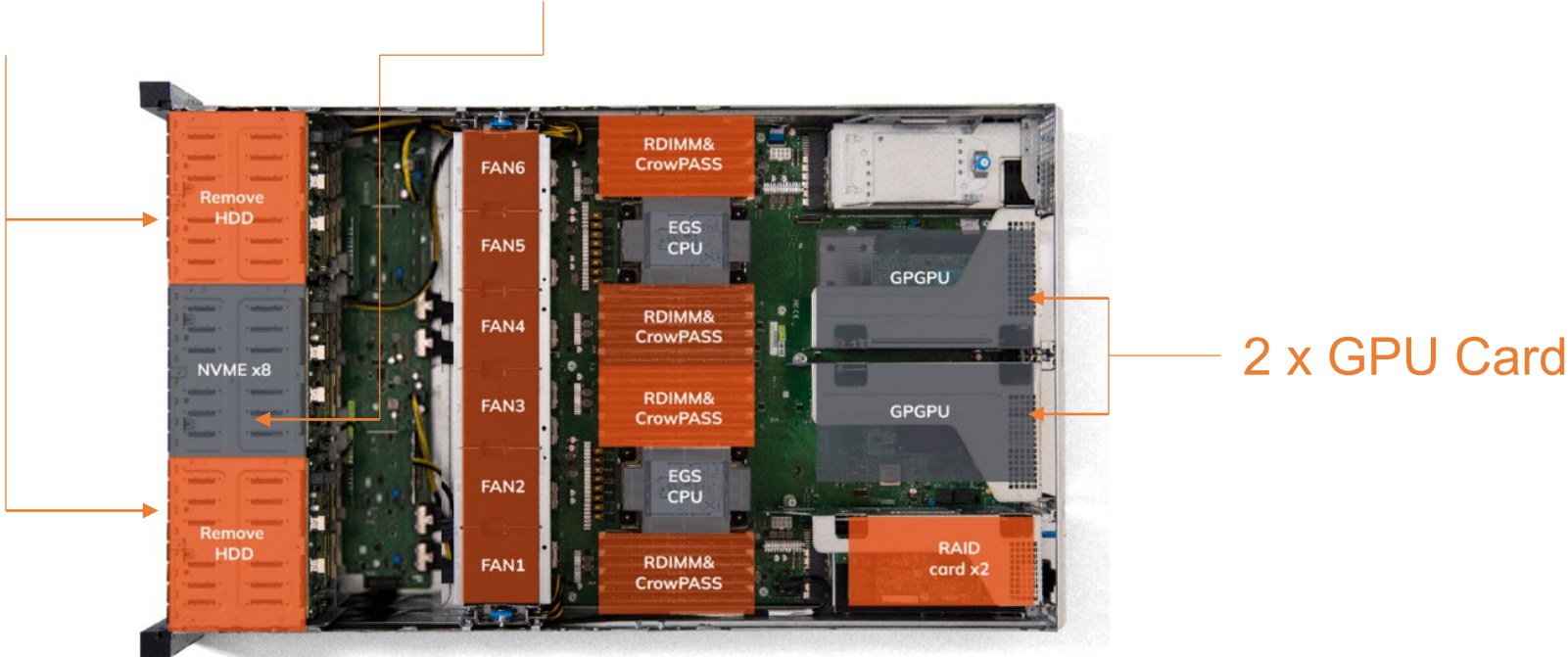
8 x U.2 NVMe SSD



# Hybrid Storage with 2 x Dual-Slot GPU Card Configuration

16 x 2.5"  
SATA/SAS SSD/HDD

8 x U.2  
NVMe SSD



# Hybrid Storage with 2 x Dual-Slot GPU Card Configuration

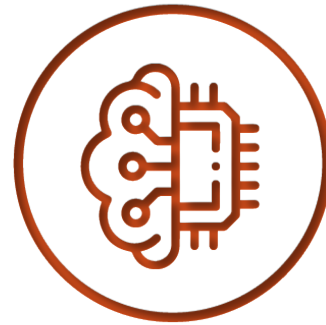
Meet a Variety of Application Scenarios



Virtualization



Database and Storage



AI Deep Learning



Web Servers

# Product Specification (1/2)

## Ellington Specifications

<b>FF/ dimension</b>	19" 2U, Full width , 482.9 x 87 x 803mm (W x H x D)
<b>CPU + Chipset</b>	Intel Eagle Stream XCC Socket E x2, link via UPI2.0 up to 4, TDP~350W/socket, 64GB HBM2e design reserve + Emmitsburg PCH x 1 support 2 CPU, TDP ≤ 13W, link with CPU via DMI Gen3.
<b>GPU support</b>	GPU x2, via double width/ full length/ full height PCIe card x2 support. Target A100 PCIe Dual Slot 300Wx2
<b>Sys Memory</b>	8 channel/ CPU x2, support 2DPC: <ul style="list-style-type: none"><li>• 1DPC: DDR5 up to 4800 x 16 slot, max 4TB.</li><li>• 2DPC: DDR5 up to 4400 x 32 slot, max 8TB.</li></ul> RDIMM-3DS support. Module with 8/16/32/64/128/256GB support. Optane Pmem 300 series "CrowPass (CPS)" support: <ul style="list-style-type: none"><li>• 128~512GBGB DIMM, max 8TB.</li><li>• DDR5 DIMMx8 + NVM DIMMx8/ CPU support.</li><li>• ~15W support.</li></ul>
<b>BMC</b>	ASPEED AST2600, Cortex A7x2+M3, SDRAM: DDR4 1600 up to 2GB
<b>Storage</b>	Onboard Storage <ul style="list-style-type: none"><li>• M.2 2280x 1, NVMe &amp; SATA support</li><li>• Up to 24 x 2.5" SFF NVMe from PCIe Switch Boards (PEX89072)</li></ul> RAID0/1/5/10 via BRCM 9670-24i RAID card support. <ul style="list-style-type: none"><li>• 16 x 2.5" SFF SATA/SAS + 8 x U.2 NVMe support</li></ul>
<b>Expansion slot</b>	PCIe 5.0 x 8 slots: <ul style="list-style-type: none"><li>• PCIe x16 x 2 from CPU0/1, FHFL, 300W</li><li>• PCIe x8 x 5 from CPU0/1, FHHL x 4, HHHL x 4, 25W</li><li>• OCPv3 (powered in S5) from CPU0: x1</li><li>• M.2 2280 x1 from PCH</li><li>• All x16 slots must support CXL flex bus</li></ul>

# Product Specification (2/2)

## Ellington Specifications

<b>I/O</b>	<ul style="list-style-type: none"><li>• USB3.2 Gen1 x2 (5Gbps, rear x2 )</li><li>• USB 2.0 x 2 (front )</li><li>• VGA x2 (front x1 + rear x1 )</li><li>• Serial port x1 (internal)</li><li>• 1x Power button</li><li>• 1x ID button</li></ul>
<b>LAN On board</b>	RJ-45 dedicated IPMI LAN x 1 RJ-45 1GbE x1
<b>LAN Via PCIe Card</b>	QSFP28 100 GbE x2 Agilio CX, 2x40GbE.
<b>LAN Via OCP slot</b>	OCP3.0 x16 SFF
<b>Security</b>	Support TPM 2.0 (Nuvoton NPCT750) Support PFR 3.0 ( Lattice LFMNX-50-5FBG484C)
<b>Management SW</b>	IPMI 2.0/ Redfish KVM with dedicated LAN
<b>OS</b>	MSFT Windows Server2022/ RHEL8.4, 8.5 and later /SLES 15 SP3 and later /Ubuntu 21.10,22.04 LTS and later
<b>Power</b>	2000W 1U Power Supplies x 2 with PMBus <ul style="list-style-type: none"><li>• External PSU: AC to DC48V when add internal PDB for DC48V</li><li>• Internal PSU: AC to DC12V when remove PDB, total power depends on inventory.</li></ul> ACPI/ APM power management Redundant PSU
<b>Thermal Solution</b>	6056 FAN x6



# Product Front /Rear View

